

Chapter IX

ORGANIZATIONAL DEVELOPMENT

Since its beginning, organizational responsibility for Army aviation had been badly fragmented at all levels of command. With the rapid growth of Army aviation following the end of the Korean War, a better organizational structure emerged. The key element in this reorganization was the approval by the Chief of Staff of the Army in January 1955 of the establishment of an aviation division in the Department of the Army G-3 for overall staff supervision. The Director of Army Aviation in G-3 became the focal point of all Department of the Army actions relating to the program. Army aviator assignment authority was also centralized in the Department of the Army G-1.

At the CONARC level, most of the functions related to Army aviation were drawn together into an Army Aviation Section in the special staff in October 1956. The Army Aviation Center, including an aviation test board, was established at Fort Rucker in February 1955. Of vital importance to the growth of Army aviation was the assumption by the Army of depot maintenance and supply responsibilities and certain changes in procurement control procedures.¹

A significant expansion of Transportation Corps activities in regard to Army aviation also took place. The assumption of depot responsibility from the Air Force led to the establishment by the Transportation Corps of an extensive aviation maintenance and supply system. Management of this system was centralized in the Transportation Supply and Maintenance Command at St. Louis. The Transportation Corps also had a number of other field agencies which were devoted to varying degrees to different aspects of aviation transportation.

The expanding tactical use of Army aviation was reflected in the organization of the combat field elements of the Army. As the Army division evolved from the triangular organization of World War II and Korea to the AFTA concept, the PENTOMIC divisions, and finally the ROAD divisions, the aviation component in the division structure steadily increased. In addition to the aviation expansion in division organizations, new separate Army aviation units were developed in response to equipment improvements and new concepts in the employment of aviation.

Organization Changes in the Department of the Army

The Army Aviation Branch, Organization and Training Division, in the Office of the Assistant Chief of Staff, G-3, had been established in the Department of the Army on 21 April 1954. Within the year, the expanded use of aviation, particularly in combat elements, greatly increased the size, scope, and complexity of G-3's responsibilities in relation to Army aviation. General Ridgway in January 1955, as a result of the comprehensive review of the aviation program, directed that Army aviation functions be consolidated in one element of the staff in order to give the program greater visibility and to provide firmer supervision.

As a result of General Ridgway's decision, on 1 February the Army Aviation Branch was discontinued and a separate Army Aviation Division was created in G-3. To indicate the importance of the program and of the Army Aviation Division, it was to be headed by a general officer. The division was established with an authorization of 11 officers, 1 warrant officer, and 5 civilians.

The general officer position was not immediately filled, and on 3 January 1956 the Army Aviation Division was expanded into a Directorate of Army Aviation. Maj. Gen. Hamilton H. Howze was appointed the first Director of Army Aviation. Although not an aviator himself at the time of his appointment, General Howze was to become the key figure in the growth of Army aviation during the next six years. The directorate originally had the same staff as the Army Aviation Division, but in March 1956 a manpower control survey authorized three additional military and two additional civilian spaces.²

In addition to the G-3, which became the Deputy Chief of Staff for Operations in 1956, several other elements of the Army staff were concerned with Army aviation. The Chief of Research and Development was directly responsible to the Chief of Staff of the Army for the overall supervision of all Army research and development programs. In this capacity, he assisted and coordinated the many activities of the Transportation Corps and CONARC related to the development of aircraft and equipment for the Army aviation program.

The Assistant Chief of Staff, G-1, who became the Deputy Chief of Staff for Personnel in 1956, had responsibility for the assignment of aviation personnel. The expansion of the aviation personnel program posed problems which had to be resolved at a high staff level. The responsibilities of the Department of the Army G-1 included recruiting new personnel for the program, managing the careers of those in it, and screening records of officers of doubtful future value.³

Organization Changes in the Transportation Corps

The Office of the Chief of Transportation had been reorganized early in 1953 when the Transportation Corps assumed logistical responsibility for Army aircraft from the Ordnance Corps. To direct the Transportation Corps' Army aviation activities, including staff and technical control of the field installations involved, and Air Transport Division, monitored by the Assistant Chief of Transportation for Operations, was established.

Because of the newness of the mission and the rapid growth of the program, Army aviation was temporarily excluded from the reorganization of the Transportation Corps in the fall of 1953. In view of the growing program, however, the position of Assistant Chief of Transportation (Army Aviation) was created in March 1954. He directed the activities of the Army Aviation Division (a redesignation of the Air Transport Service Division) and supervised the Transportation Corps Army aviation field installations. The Army Aviation Division consisted of the following components: Plans and Programs Office, Training Branch, Engineering and Development Branch, Procurement and Supply Branch, and Maintenance Branch.

To handle procurement and production, supply control, and maintenance functions of the program in the field, the Transportation Corps established the Transportation Corps Army Aviation Field Service Office (TCAAFSO). This field agency, located at St. Louis, began operations in January 1953.⁴

When the Transportation Corps began planning in 1954 to assume the depot functions from the Air Force, one of its first considerations was the organizational realignment of materiel functions. The separate Army aviation structure had been regarded as a temporary expedient, and one which was fundamentally at variance with the basically functional organization of the Transportation Corps. Action to combine TCAAFSO with the Transportation Materiel Command—which was only concerned with surface materiel—and to consolidate materiel functions in the Office of the Chief of Transportation had been deferred pending the attainment of a greater degree of maturity in the aviation logistic support mission. Since two of the three planned transportation sections at the general depots would soon be handling air as well as surface items, the Transportation Corps deemed essential that the merger of the two field elements be accomplished prior to the scheduled initiation of the interservice transfer of responsibilities on 1 July 1955. Office space limitations and the pressure of time, however, made an immediate physical merger impossible. As an interim measure, a joint skeleton staff, drawn from both field commands, was formed to build and develop the new headquarters and to make detailed plans for the phased integration of the two commands. The Transportation Supply and Maintenance Command (TSMC) was established at St. Louis on 1 March 1955, and was placed in command of TCAAFSO and the Transportation Materiel Command. By 1 July, though the absorption of the commands was still in progress, TSMC had attained operational status.

At the same time, a focal point in the Office of the Chief of Transportation was established for the direction and guidance of the new field agency. In the spring and summer of 1955, responsibilities pertaining to procurement, production, and supply distribution of Transportation Corps air materiel were transferred from the Army Aviation Division to the Supply and Maintenance Division.

Experience after the assumption of depot responsibility pointed to defects in this organization. Along with other responsibilities relating to the Army aviation program, the Army Aviation Division continued to handle end item requirements determination, engineer change proposals, monitoring of aircraft utilization, and the computation of flying hour factors. Although there was some shifting of functions from the Army Aviation Division to materiel elements in the

Office of the Chief of Transportation and TSMC, these problems were not fully resolved until late 1958. At that time, the Army Aviation Division was discontinued, and its remaining materiel functions were turned over to the Supply and Maintenance Division. At the same time, the position of Assistant Chief of Transportation (Army Aviation) was discontinued and functions relating to training and military personnel were given to the Training and Organization and Military Personnel Divisions. Remaining staff functions dealing with overall planning and coordination and systems analysis were brought directly under the Deputy Chief of Transportation for Aviation, a position which had been established in August 1958 to give direction to all phases of the Transportation Corps' Army aviation program.⁵

On 1 July 1959, the Transportation Corps underwent another reorganization. The position of Deputy Chief of Transportation for Aviation was retained to serve as the Chief of Transportation's principal assistant and advisor on Army aviation. The Deputy Chief of Transportation for Aviation continued to be responsible for the execution of approved plans and programs pertaining to all phases of the Transportation Corps Army aviation program. He evaluated overall policies and practices in the light of objectives and progress achieved, making changes in the best interest of the Chief of Transportation. To fulfill this responsibility, he coordinated Transportation Corps activities with the other Army agencies involved in Army aviation.

The Assistant Chief of Transportation (Military Operations) was responsible for development of concept and doctrine, preparation of plans, and supervision of the Transportation Corps portion of the Army Aviation Training Program, and also directed military personnel activities. Aviation activity constituted the major responsibility of the Assistant Chief of Transportation for Materiel. He was responsible for timely and adequate materiel support by the Transportation Corps; for staff and technical supervision over materiel, standardization, requirements, cataloging, procurement, production, supply distribution, storage and depot operations, maintenance, and disposal; and for industrial mobilization activities. The Transportation Supply and Maintenance Command was redesignated as the Transportation Materiel Command in October 1959 and actually performed this mission. The Assistant Chief of Transportation for Research and Development was responsible for the development and execution of the research and development program for all Army aviation.

Following the FY 1959 reorganization, the Chief of Transportation and the Assistant Chief of Transportation for Materiel investigated TSMC and provided suggestions for helping the command control its serious problems. These problems had also led to investigation by the Army Inspector General in March 1959 and the General Accounting Office in September. A Department of the Army DCSLOG team inspected the National Inventory Control Point in October and by the end of 1960, most of these problems had been solved or were well on the way to solution.

The major complaint about organization and management concerned the Procurement and Production Division of the Transportation Materiel Command which had divided its aircraft procurement staffs and lacked quality control and cost analysis offices. These defects were

remedied. To shorten the commander's span of control, four deputy commanders were appointed, one to handle administration, another supply management, a third maintenance, and the fourth research, development, and testing. The investigators also noted the lack of maturity and skills among procurement and maintenance personnel, a problem which TSMC had begun to attack during FY 1958. About 500 jobs were reevaluated. An accelerated and intensive recruiting program, with schooling for about 125 individuals in various procurement and maintenance management courses, laid the basis for orderly progress. The publication of a handbook of principles for Transportation Corps commodity managers also helped.

These basic management improvements were essential for better supply effectiveness, procurement, and maintenance, but more important, they were mandatory to the assumption of further responsibilities in Army aviation support.

In addition to the Transportation Materiel Command, the Transportation Corps had several other field agencies devoted to Army aviation. The Transportation Research and Engineering Command at Fort Eustis contained an Aviation Division which conducted research and development related to Army aircraft. The command was subsequently redesignated the Transportation Research Command. The Transportation Army Aviation Coordinating Office at Wright-Patterson Air Force Base, Ohio, provided coordination for the Chief of Transportation and Transportation Corps agencies with certain agencies of the Air Force and the Navy. This office supervised the execution of the Army's research and development program performed for the Army by the Air Force, Navy, and Civil Aeronautics Administration. The Transportation Aircraft Test and Support Activity at Fort Rucker came under the control of the Transportation Materiel Command. Its primary mission was the conduct of phase F (logistical evaluation) tests of new types of aircraft. These tests were conducted to determine service life of components, inspection cycles, improve technical publications, and to develop quick change kits and modifications. The Transportation Training Command and Transportation School located at Fort Eustis were responsible for maintenance training and training in other aspects of Transportation Corps mission relating to aviation.⁶

The 1962 reorganization of the Army abolished the Office of the Chief of Transportation. Transportation Corps functions relating to training were transferred to CONARC, those relating to logistics were transferred to the United States Army Materiel Command, and those involving research and development were split between the United States Army Materiel Command and the United States Army Combat Developments Command.

Organization Changes in CONARC

Establishment of Army Aviation Section

The establishment of the Director of Army Aviation at the Department of the Army level in January 1956 had a direct impact on CONARC. A difference of opinion existed between CONARC and the Department of the Army as to the direction the Army aviation program should take.

On 28 May 1956, General Willard G. Wyman, the CONARC commander, wrote to General W. B. Palmer, the Vice Chief of Staff of the Army, regarding future functions and responsibilities of CONARC. General Howze had recently visited the headquarters to urge that the rapid expansion of Army aviation required a special degree of coordination at each level of command. He felt that the lack of an identifiable coordinating agency at CONARC was a missing link in the structure. While General Wyman did not agree completely with General Howze's views, he took the opportunity to suggest to General Palmer that if the G-3 Aviation Division continued in the operational and training fields it properly belonged at the CONARC level. General Wyman agreed that the procurement and distribution of aircraft, together with worldwide analysis of aircraft utilization, availability of aviation personnel, and correlated matters, belonged at the Department of the Army level. General Wyman believed, however, that action to relieve difficulties that arose in organization and training, establishment and review of training policies, and all other functions pertaining to Army aviation in the United States were CONARC's responsibility, except for broad supervision at the Department of the Army level. Instead of establishing a distinct aviation element in CONARC headquarters, General Wyman urged the transfer of the G-3 Aviation Division to CONARC. He informed General Palmer that this would require no increase in space allocations and might possibly lead to some reductions.

The Department of the Army did not favorably consider General Wyman's suggestion to transfer the Army Aviation Division to CONARC. General Palmer informed the CONARC commander that there were many aspects of the aviation program which would have to be handled by the Department of the Army, even if the division were transferred to CONARC. He recognized CONARC's responsibilities in the indicated areas and told Wyman to establish an Army aviation section at CONARC. But General Palmer made it clear that there would be no transfer of Department of the Army functions relating to Army aviation to CONARC.⁷

The Army Aviation Section of Headquarters, CONARC, was organized on 22 October 1956, consisting of the Training, Operation, Doctrine, and Organization Division; the Materiel, Maintenance, and Supply Division; and the Administrative and Analysis Division. The mission of the section was to advise the commanding general and the staff on matters pertaining to Army aviation activities; within established policies, direct and control courses, curricula, and instruction at Army aviation schools; review and revise existing organization, doctrine, tactics, and techniques; determine the state of training of individuals and units; determine and formulate requirements for product improvement of materiel; and assist appropriate staff sections in the direction, coordination, and inspection of Army aviation activities. The section had an authorized strength of 1 general officer, 2 colonels, 2 lieutenant colonels, 4 majors, 1 master sergeant, and 5 civilians. The general officer space was not filled and CONARC subsequently revised the authorized strength to 4 colonels, 2 lieutenant colonels, 3 majors, 1 warrant officer, and 5 civilians.

On 4 April 1957, Army Regulation 10-7 established new policies, functions, and activities for the organization and functions of CONARC. Basically, the new regulation covered the same aviation activities and functions as before. The scope of the aviation activities, however, was

expanded to provide specifically for the direction, supervision, coordination, and inspection of all matters pertaining to organization and training of all Army aviation units and personnel within CONUS, except Army aviation activities directly assigned to the Chief of Transportation.⁸

Prior to the establishment of this section, responsibilities for aviation had been diffused throughout the headquarters. Although the various general and special staff sections retained the same functions and responsibilities for aviation as for other arms, services, and activities, the Army Aviation Section served as the focal point for this rapidly growing, complex, and many-sided field.

During 1961, the Army Aviation Section was reorganized and given a more detailed statement of missions and functions. The number of divisions in the section was increased to four: Program, Safety, and Airspace; Materiel, Facilities, and Armament; Training; and Organization, Plans, and Doctrine.

The mission of the Army Aviation Section was now stated in the following terms: The Army Aviation Officer advises the Commanding General and the staff on Army Aviation and air space matters, provides staff supervision over Army Aviation operations throughout the Command and assists the general staff in actions involving Army Aviation activities and functions.⁹

The Army Aviation Section was responsible for exercising direction, supervision, coordination, and inspection of all matters pertaining to the organization and training of Army aviation units and personnel within the continental United States, except for those Army aviation units and personnel directly associated with field and depot maintenance and supply and those aviation activities directly assigned to the Chief of Transportation. It recommended to the Deputy Chief of Staff for Operations, Plans, and Training appropriate aviation elements for operational, training, and other missions.

The section was responsible for the preparation, review, and revision of current and proposed organization, doctrine, tactics, techniques, and training literature for all Army aviation type units involving the employment of organic manned and unmanned aircraft. It directed and controlled the courses, curricula, and instruction at the Army Aviation School and CONARC aviation courses of instruction to include those operated under civilian contract.

The Army Aviation Section initiated and coordinated qualitative materiel requirements as well as requirements for product improvement for air support operations involving the employment of organic manned and unmanned aircraft. It prepared detailed comments and recommendations on feasibility studies; proposed military characteristics; items under development; plans for user (service and troop) tests; reports of user and engineering tests and classification of materiel as to type; and basis of issue. The section also prepared and supervised tactical troop tests and combined troop tested of units and equipment.

The Army Aviation Officer recommended to the Deputy Chief of Staff for Operations, Plans, and Training priorities for the allocation of critical items of equipment and allocation of equipment and aircraft for training of units and individuals of the active Army, reserve components, and the ROTC. The section ensured that the organization and training program of

Army aviation fixed wing and rotary wing transport units and organic aviation sections and units and the availability of equipment were coordinated.

The section established and implemented the CONARC Army Aviation Safety Program; reviewed accident investigation reports on aircraft under operational control of CONARC; and reviewed aircraft accident report analyses, determining adequacy of corrective action taken and recommending further action. It reviewed plans for the activation, organization, and stationing of Army aviation units and submitted comments and recommendations thereon to the Deputy Chief of Staff for Operations, Plans, and Training.

The growing Army interest in air traffic control was shown by the responsibility for directing, coordinating, reviewing all matters pertaining to and affecting the establishment, utilization, retention, modification, and revocation of Army assigned airspace at all Army installations within the continental United States. The section also exercised direction, review, and revision of flight regulations for Army aircraft operations within the continental United States.

The Army Aviation Section assisted other staff elements in the preparation of personnel and MOS training requirements for training and mobilization; tables of distribution and allotment of personnel required to conduct instruction at schools and training commands; Army extension course programs and extension course material; policy governing attendance of personnel at schools, quotas, and prerequisites for attendance; new concepts of organization, doctrine, tactics, and techniques; mobilization and capabilities plans and primary programs; programs and procedures concerned with supply of units; training and maintenance directives and guidance to include Army training programs and Army training tests; policy, doctrine, and procedures affecting the Reserve Components and ROTC; and logistic actions incident to training or operation of aviation units or schools.

In coordination with the appropriate staff sections, the Army Aviation Section reviewed policies concerning the allocation and assignment of officers, warrant officers, and enlisted men of Army aviation; procedures pertaining to the flow of officers, warrant officers, and enlisted men into, through, and out of the Army aviation training system; instruction pertaining to Army aviation at other schools; Army aviation aspects of the CONARC Human Research and Operations Research Office activities; requests, requirements, and assignment of tasks placed upon the Army Aviation School and courses; and operational and training concepts and requirements to ensure that they were integrated into the systems management programs for Army aircraft.¹⁰

Although the Army Aviation Section was the CONARC staff element mainly responsible for Army aviation, many other offices were involved with the program to a varying degree. The rapid changes in aviation equipment and organization intimately involved the Organization and Equipment Division and the Doctrine and Requirements Division of the G-3 Section, the General Division of the Combat Developments Section, and the Army Aviation and Airborne Division of the Materiel Developments Section. The G-2 Section and the Transportation Section also became involved in various Army aviation matters. The organization of

Headquarters, CONARC, before the advent of the Army Aviation Section (1955) and at two later dates (1957 and 1959) is shown in charts 1,2, and 3.

1962 Reorganization

During 1962, a major reorganization of the Army took place which established the United States Army Materiel Command, placed the technical service schools—including the Transportation School—under the command of CONARC, and removed the combat development function from CONARC with the establishment of the United States Army Combat Developments Command. This organization of the Army was to remain unchanged until 1973.

The reorganization eliminated all special staff sections, including the Army Aviation Section, within Headquarters, CONARC. Aviation staff officers were decentralized throughout the headquarters, but there was an Aviation Division in the Office of the Deputy Chief of Staff for Unit Training and Readiness. The Aviation Division consisted of four branches: Training Branch, Plans and Operations Branch, Aviation Safety and Airspace Branch, and Equipment Requirements Branch. The functions of the division remained much the same as in the old Army Aviation Section except for the removal of the responsibility for individual training to the Office of the Deputy Chief of Staff for Individual Training and doctrinal matters to the United States Army Combat Developments Command.¹¹

Establishment of the Army Aviation Center

As a result of recommendations submitted by the Chief of Army Field Forces to the Department of the Army in the fall of 1954, an Army Aviation Center was established at Camp Rucker, the site of the Army Aviation School, during the latter half of fiscal year 1955. Establishment of this center was expected to aid materially in the successful conduct of operations of the Army Aviation School in support of the continuing expansion of Army aviation as an element of the Army's field forces.

While the Army Aviation Center was officially established, effective 1 February 1955, by Department of the Army General Orders 17, 2 March 1955, the mission and proposed elements of the center were not officially determined until near the end of the fiscal year. As recommended by CONARC on 18 March and approved by the Department of the Army on 12 April, the Army Aviation Center comprised the following major elements: Army Aviation Center Headquarters; Army Aviation School; school troops; and the Army Aviation Flight Safety Board.¹²

The U.S. Army Aviation Flight Safety Board, consisting of 2 officers, 1 enlisted man, and 2 civilians, had originated at Fort Sill, before the transfer of the school, as the Aircraft Accident Review Board. Until 24 September 1956, the mission for the organization, operation, and support of the Army Aviation Flight Safety Board was vested in the Army Aviation School. The establishment of the responsibility for prescribing and coordinating safe practice and safe operating standards applicable to flight operations of Army aircraft in the Office of the Director of Army Aviation, Department of the Army, resulted in a reevaluation of the mission of the Army Aviation Safety Board.

As a result of this reevaluation, and with the concurrence of CONARC, the board was reorganized and transferred to the Army Aviation Center, effective 24 September 1956. AR 15-76, 3 January 1957, announced the establishment of this board and the mission, composition, tasks, direction, and control and administrative responsibility for its operation. On 25 April 1957, the Army Aviation Safety Board was officially established as a Class II activity at Fort Rucker under the jurisdiction of the Deputy Chief of Staff for Military Operations, Department of the Army, to conduct research and determine what improvements could be made in aviation materiel, operations, supervision, personnel, and training. Based on this research, the board recommended appropriate actions to enhance the durability, reliability, and efficiency of Army aviation, particularly in its combat environment. The board was authorized direct communications with any agency or individual on aircraft accidents, accident investigation, and accident prevention, to accomplish this mission. On 25 July 1957, the board was redesignated as the U.S. Army Board for Aviation Accident Research (USABAAR).¹³

Aircraft Systems Management

On 28 February 1957, the Department of the Army proposed to CONARC the establishment of a coordinating board for new Army aircraft. So it was that during the second half of FY 1957, CONARC assisted the Department of the Army in laying groundwork for the establishment of a system under which all significant actions pertaining to a given type or model of Army aircraft—from the time of introduction into the Army inventory until withdrawal as a result of obsolescence—would be accomplished in accordance with a program developed well in advance of the time at which the various actions were to be taken.

The Department of the Army proposed that the introduction of specific aircraft should be accompanied by a board created to monitor all phases of the introduction of the item, from the time of issuance of development contracts through the cycle of procurement, distribution, and utilization in training and operations. CONARC concurred in the need for coordinating action within the Army to cover all phases of the introduction and utilization of new types of aircraft and allied equipment, but did not favor the creation of an individual board for each item.

Instead, CONARC recommended that a long range committee be established to draw up a phased program applicable to the development of aircraft and associated equipment and for the introduction of these items into the Army inventory. The timing of such a program would be based on backward planning from the date established for initial distribution of production items. The program would set the time such actions as funding, revision of TOEs, development of ground support equipment, changes in doctrine, and arrangement for factory training of mechanics and instructor personnel should be initiated and completed. CONARC also contemplated that the specific responsibility for each such action would be established and the program published as an Army regulation.

A conference, which included representatives from the principal Department of the Army general staff divisions, CONARC, and the Chief of Transportation, was held at DCSOPS, Department of the Army, on 27 March. The conferees determined that the guiding agency, at

least for launching the program, should be the Army Aircraft Systems Coordinating Group, composed of representation from the Deputy Chiefs of Staff for Personnel and Logistics, Department of the Army, CONARC, and the Chief of Transportation, and chaired by a DCSOPS, Department of the Army, representative.

At the suggestion of CONARC, it was agreed that a draft Army regulation should be prepared to identify the types of actions which would be taken under an Aircraft Systems Management Program and to determine the proponentcy for and timing of the required actions. As a framework within which the Aircraft Systems Management Program would operate, it was decided that a master schedule for phasing out and replacing all current aircraft types should be prepared. The Chief of Transportation was given the tasks of preparing the draft regulation and the aircraft replacement schedule, with such assistance as he might require from other agencies. On 4 June, CONARC officially concurred in the establishment of the proposed Aircraft Systems Coordinating Group and designated a principal and alternate member.¹⁴

Doctrine on Employment of Army Transport Aviation

On 9 July 1954, the Department of the Army requested OCAFF to prepare training literature for the employment of helicopter companies as tactical combat units. As an initial step toward meeting the requirement for training literature which reflected concepts on the employment of Army transport aviation, OCAFF/CONARC during fiscal year 1955 prepared a new training circular on this subject. Published by the Department of the Army as TC 1-7, Employment of Army Transport Aviation, on 29 March 1955, the new circular replaced Department of the Army TC 19, 1950, Transport Helicopter Company (Army) TT/O&E 55-17).

The new circular was based on the concept that the primary function of Army transport aviation was combat support, with service support as an additional function. In accomplishment of the primary function, Army transport aviation units were to have the specific mission of moving Army combat units operationally by air. Heretofore, employment of Army transport aviation had been envisaged principally as having a service support role, including such missions as delivery of supplies and replacement personnel and units and aeromedical evacuation. While rotary wing aircraft, organized in helicopter companies and battalions, constituted the existing structure of Army transport aviation at the time of the circular's preparation, it was contemplated that fixed wing transport aircraft companies and battalions would be incorporated into the structure.

In support of the new doctrine contained in the circular, CONARC in May 1955 announced a long range plan for the preparation of field manuals by various Army service schools. The Infantry School would prepare, coordinate, and submit to CONARC the manuscript for a new field manual in the 57-series entitled Army Transport Aviation—Combat Operations. This manual would provide interim guidance until such time as the subject matter was sufficiently firm to be included in branch manuals.

The Command and General Staff College was directed to prepare two publications. The first, a change to FM 100-5, Operations, would provide the general concept of employment contained

in both TC 1-7 and the manual prepared by the Infantry School. The second, a new field manual in the 100-series, would cover the employment of Army transport aviation in logistical support of Army operations. The Army Aviation School was responsible for a new field manual in the 1-series covering the organization and operation of Army aviation transport units. The Chief of Transportation was to prepare a manual covering the organization and operation of maintenance and supply units in support of Army aviation.¹⁵

Army Aviation in the New Division Organizations

The Army began the development of a new divisional organization immediately following the Korean War. Rapid advances in technology and the implications of tactical nuclear weapons required a more flexible organization than was possible with the triangular divisions which had been used in World War II and Korea. A primary consideration in the design of the new divisions was that any massing of troops or units during atomic operations would be disastrous. Units would have to be small, powerful, and self-sustaining. Success would depend on a high degree of mobility, rapid and efficient communications, and devastating fire power.¹⁶

AFTA and PENTANA

Only slight organizational changes had been made to the triangular divisions of World War II. In April 1954, at the direction of General Ridgway, a study began to improve the combat-to-service manpower ratio in the divisions and the ultimate reorganization of units. The problem was to develop organizational concepts which would permit formation of combat units with greater mobility and less vulnerability to atomic attack. The study which eventually emerged was known as the Atomic Field Army-1 1956 (AFTA-1). The ATFA study derived many of its concepts from the organization of the World War II armored division. The division structure envisioned in AFTA-1 was to be made of three independent tactical headquarters (combat commands) to which independent battalions and other organic divisional units could be attached or detached as required. Logistical support for the division would be provided by a Divisional, Logistical, or Support Command. At the same time as the ATFA study, the Operations Research Office of Johns Hopkins University proposed a radically new organization. This study recommended a break with the triangular tactical grouping by using a five-figured tactical structure. Five battalions would be grouped to form a combat command. The combat command would be solely a tactical headquarters. A corps would be formed of five combat commands, the division being eliminated.¹⁷

During FY 1955, a major portion of OCAFF/CONARC's effort was devoted to preparation of TOEs for new infantry and armored divisions and for the accompanying combat and service support units to make up the experimental field army called for by Project AFTA-1. The proposed infantry division was evaluated during Exercise FOLLOW ME and the armored division during Exercise BLUE BOLT.¹⁸

The Operations Research Office study was one of many prepared under CONARC's direction that assisted in the preparation of the Pentagonal Atomic-Nonatomic Army (PENTANA) study. This study, begun by CONARC in September 1955, developed the organizational and doctrinal

concepts for the field army in the decade 1960-1970. The PENTANA study proposed a field army with the capability of conducting sustained operations with or without the use of nuclear weapons. The field army envisioned by PENTANA was to contain five corps and an army support command. Each of the corps was to contain five divisions and two tank brigades. The universal-type PENTANA division would contain five integrated combat groups, a general support artillery battalion, and other combat and service support units. Operations of the PENTANA army would be in greater depth and involve greater dispersion of units than before.¹⁹

Aviation in the Pentomic Divisions

The PENTOMIC organization was derived from the PENTANA studies. General Maxwell D. Taylor, the Chief of Staff of the Army, apparently assumed that as long as the strategy of massive retaliation remained the national military policy any future war would be fought with nuclear weapons. He therefore saw that the Army would have to make an interim adjustment to the environment of the nuclear battlefield. To this end, the Army would have to create a single fixed standard division organization built around tactical nuclear weapons.

The new PENTOMIC organization was basically the same as that proposed in the PENTANA study. The 101st Airborne Division was the first unit organized under this concept. The program under which this reorganization took place was designated Reorganization of the Airborne Division (ROTAD). Field testing of the organization began in November 1956 when the 101st Airborne Division participated in Exercise JUMP LIGHT. Further testing of the PENTOMIC concept took place in the spring of 1957 with more than 20,000 troops from the 1st Infantry Division. The 1st Armored Division and the 101st Airborne Division, together with troops from III Corps, XVIII Airborne Corps, 3d Infantry Division, and 82d Airborne Division participated in Exercise KING COLE in Louisiana.

Increases in combat infantry strength were achieved in the infantry battle group—the PENTOMIC division's primary fighting element—while reducing the size of the unit. This gave the ROCID (Reorganized Combat Infantry Division) a small, more self-sufficient combat unit, somewhat larger than a battalion. Through increased firepower, mobility, and communications, the PENTOMIC organization enabled the division to operate with greater dispersion among the five battle groups.²⁰

During the Korean conflict, divisions had found it necessary to consolidate their separate aviation sections into provisional aviation companies. These provisional units provided adequate supervision and control of aircraft maintenance and supply, developed and implemented an effective integrated retraining program, and coordinated and controlled aircraft utilization. The division structure devised under Project ATFA-1 included many of the changes that had been battle tested in Korea and carried forward in the PENTANA study and the PENTOMIC organization. Army aviation elements were consolidated into company-size units at division, corps, and army levels. The introduction of the combat aviation company into each division increased the organic aircraft in an infantry division from 26 to 50, in an armored division from 28 to 50, and in an airborne division from 26 to 53.²¹

Advanced plans for the TOEs of Army aviation organizations for the revised type corps and field army were prepared by the Army Aviation School. CONARC reviewed these plans, established a command position, and submitted them to the Department of the Army G-3 for placement in final advance plan format and for submission to the Department of the Army for concept approval. The TOEs for the Fixed Wing Aviation Company (Light) were given priority because certain aviation units were scheduled for reorganization under these tables in the second quarter of FY 1958. The TOEs were published for the new PENTOMIC infantry, armored, and airborne division aviation companies during the second quarter of FY 1957. Reorganization of the various divisional aviation companies under these TOEs was initiated in the third quarter of that year. Plans were completed during the year to provide additional personnel, equipment, and facilities required to support the reorganization. Minor revisions of the TOEs resulted from troop tests and field exercises. An example of the revisions was the consolidation of all aircraft into the ROTAD (airborne) division aviation company from the airborne division reconnaissance troop and consolidation of first and second echelon aircraft maintenance. These changes resulted in moving 18 additional aircraft and approximately 107 personnel into the airborne division aviation company.²²

The consolidation of Army aviation into company-sized units improved maintenance and logistical support. This reorganization permitted the attainment of a high degree of training and technical proficiency. Although it greatly improved the use of Army aviation, problems were soon evident with the new organization. It did not always provide the immediate aviation support enjoyed previously by certain subordinate elements of the division. To a great extent this problem was aggravated by inadequate allocations of aviation support and excessive maintenance requirements. The need for continuous aviation support quickly outstripped the resources of the approximately fifty aircraft in the aviation company. Fresh studies indicated that divisions could fully utilize from 90 to 100 aircraft, and that at least 20 organic transport helicopters should be included in the total.²³

The following units containing Army aviation were included in the organizational structure of the field army under the PENTOMIC concept:

- **Army Aviation Company, Headquarters Field Army** provided the army headquarters and its elements with aerial observation, reconnaissance, transportation, and other aerial missions within its capabilities.
- **Signal Battalion, Army** had an organic aviation section within the headquarters and headquarters company.
- **Aerial Reconnaissance Support Battalion** had a signal air photo reproduction and delivery company which provided finished aerial photo materiel down to division levels.
- **Headquarters, Air Defense Artillery Brigade** had a small organic aviation section within the brigade headquarters which contained two reconnaissance helicopters and one observation airplane.
- **Air Defense Artillery Group** contained an aviation section equipped with one observation airplane and one reconnaissance helicopter.

- **Artillery Battalion, 280-mm. Gun** had two observation airplanes within its organic aviation section.
- **Aviation Company, Armored Cavalry Regiment** increased the combat effectiveness of the regiment by providing the regiment and its elements with immediately responsive aviation support.
- **Sky Cavalry Squadron, U.S. Army Missile Command (Medium)** performed reconnaissance through the use of a combination of ground and air reconnaissance elements over wide fronts and extended distances. The sky cavalry troop of the squadron also provided security by surveillance and by the air transport of the airborne reconnaissance platoon to critical areas.
- **Army Ambulance Company (Rotary Wing)** had thirty-eight utility helicopters which were allocated and controlled by the field army surgeon to provide normal aeromedical evacuation support.
- **Army Aviation Operating Detachment** provided flight information and planning data; coordinated day, night, and instrument flights; provided enroute navigational aids; provided air traffic control; and provided operations service for Army aviation units.
- **Headquarters and Headquarters Detachment, Aviation Group** provided command, control, staff planning, and administrative supervision to assigned or attached Army aviation units.
- **Headquarters and Headquarters Detachment, Transportation and Transport Aircraft Battalion** provided command, control, staff planning, and administrative supervision for two to seven transport aircraft companies.
- **Aviation Fixed Wing Light Transport Company** provided air transport to expedite tactical operations and logistical support in the combat area.
- **Transportation Company, Light Helicopter, and Transportation Company, Medium Helicopter** both provided air transport to expedite tactical operations and logistical support within the combat zone.
- **Corps Aviation Company** provided corps headquarters and its element with aerial observation, photography, reconnaissance, tactical transport, and other aerial missions within its capabilities.
- **Corps Artillery Aviation Company** provided corps artillery units with immediately available and responsive aviation support.
- **Corps Signal Battalion** contained a 2-aircraft aviation section.

The PENTOMIC division Army aviation organizations consisted of the following units:

- **Armored Division Aviation Company** increased the combat effectiveness of the armored division by providing the division and its elements with immediately responsive Army aviation support.
- **Infantry Division Aviation Company** increased the combat effectiveness of the infantry division and its elements with on call aviation support.

- **Airborne Division Aviation Company** provided the airborne division and its elements with aerial observation, reconnaissance, resupply, and transportation.²⁴

Fixed Wing Light Transport Companies

A significant event in the development of Army transport aviation had been the development in OCAFF of a type transportation light aircraft company, and the activation of one of these companies by the Department of the Army.

Because of difficulties in the procurement of H-21 helicopters to equip transportation helicopter companies, and in light of the highly favorable comparison of the OTTER fixed wing aircraft on an initial costs, man-hour maintenance, payload, operational radius, POL consumption, and general performance basis, OCAFF in July 1954 had recommended to the Department of the Army that the OTTER be adopted as substitute standard for the one and one-half ton payload helicopter and that approximately 100 of these aircraft be procured to equip one battalion of transportation cargo aircraft companies (light) in lieu of one programmed battalion of transportation helicopter companies (light).

The Department of the Army approved these recommendations on 30 September 1954 and directed OCAFF to prepare a TOE for a light cargo fixed wing company. The early activation of these fixed wing transport companies was approved at this time. To meet this requirement, CONARC prepared and forwarded to the Department of the Army on 19 March 1955 TOE 55-107, Transportation Light Airplane Company. This table, published on 15 April as TOE 1-107 (Tentative), Army Aviation Company (Fixed Wing-Tactical Transport), called for a unit equipped with twenty-one OTTER type aircraft. The Department of the Army on 5 May directed the activation of the first of these companies—the 14th Aviation Company—at Fort Riley. The second company was activated during FY 1956 and the final company in August 1956.²⁵

The Department of the Army advised CONARC that only officer aviators would be assigned to the 14th Aviation Company since the fixed wing training program for warrant officers had not yet been approved. The Army Aviation Unit Training Command at Fort Riley was responsible for supervision of the activation and for unit training. The 14th Aviation Company received the OTTER aircraft beginning in August.²⁶

Medium Helicopter Aviation Company

During the fall of 1955, CONARC formulated a concept for an Army aviation medium helicopter company to be equipped with 6,000-pound payload twin-engine helicopters, forwarding in December the concept and a proposed TOE to the Department of the Army for review and concept approval. The proposed company was to be equipped with sixteen H-37 MOJAVE helicopters, delivery of which was expected to begin during February 1956. These aircraft were at that time the largest helicopters in production in the United States. CONARC considered that four of these companies, operating together, would have a capability of airlifting 192 tons—the weight of the assault echelon of an infantry battalion. The internal organization of the company was to consist of a company headquarters, four flights of four aircraft each, and

a maintenance element and twenty-eight pilots. Subject to Department of the Army concept approval, CONARC foresaw the activation of the first of these companies during 1956.²⁷

Critical shortages of special tools and instructional equipment in FY 1958 delayed H-37 pilot and mechanic training courses. During April 1957, the Army Aviation School had requested supply action to provide special tools and equipment for the conduct of pilot and mechanic training for the H-37. Delivery of helicopters to the school began in January 1958, with concurrent delivery of special tools.

On 1 February 1958, the 4th Transportation Company (Medium Helicopter) became the first company to be equipped with the H-37. CONARC advised the Deputy Chief of Staff for Logistics, Department of the Army, that mechanic training could not be initiated without minimum quantities of special tools, the conversion of H-34 companies to H-37s could not be accomplished until trained mechanics were available, and that delivery of new production H-37s could not be accepted until trained operating and maintenance personnel were available at the receiving unit. The Chief of Transportation agreed to place new production helicopters in limited storage at a depot pending verification of the availability of tools necessary to initiate crew transition training and development of a balanced capability at receiving units to operate the aircraft.

On 8 April 1958, the Chief of Transportation indicated that tools critical to the initiation of crew transition training would be available at Fort Rucker by 30 April. Training courses were started at the Army Aviation School on 5 May, with four complete crews being graduated during the latter part of June. Conversion of the 54th Transportation Company at Fort Sill started on 1 July and a second company, the 64th at Fort Knox, converted late in the second quarter of FY 1959.²⁸

Army Aviation in the ROAD Organization

The PENTOMIC structure had never been intended as more than an interim solution to the Army's organizational problems. Field tests of the PENTOMIC organization continued after its adoption in 1956 and revealed significant weaknesses. A major problem was the marked imbalance between the PENTOMIC division's nuclear and nonnuclear capabilities. In the PENTOMIC division, tactical nuclear weapons had become the mainstay of the ground forces.

Experience had shown the PENTOMIC divisions to be relatively inflexible, fixed organizations. They had only a single echelon between the division commander and the company commander, giving the division commander a span of control that included sixteen units. Field tests had shown that this span of control was much too large.²⁹

Development of the ROAD Concept

During 1959, CONARC prepared an organization study entitled the Modern Mobile Army 1965-1970 (MOMAR I). The purpose of the study was to supply a common, unifying long range objective to focus Army-wide efforts aimed at modernization of equipment, organization, doctrine, techniques, and procedures. The MOMAR I study was published in February 1960.

The MOMAR I study assumed that limited, rather than general, war was the most likely. Such a war would be characterized by limited objectives, restricted geographical areas of combat, restrictions upon types of weapons employed, limitations upon the forces participating, and restrictions on the phasing and timing of operations. The forces employed by the Army would require a capability to employ both conventional and special weapons in a graduated and selective mix best suited to the immediate situation.

The MOMAR I division would be composed of five combined arms combat commands, each capable of semi-independent operations. The division could be tailored to fit particular environmental or mission requirements by the attachment or detachment of combat commands in any combination. The MOMAR I field army would also have air transportable combat brigades for rapid reaction in cold or limited war situations. These brigades would be multi-capable, fighting organizations which could be transported by a minimum of strategic aircraft to any point in a matter of hours or a few days. There would also be fire support brigades composed of air-transportable composite fire support units, designed to provide multi-capability (nuclear, chemical, biological, and conventional) and multi-purpose support for local indigenous forces.³⁰

By the end of 1960, the Army had decided that the MOMAR I organization lacked the necessary flexibility to meet the Army's needs. Drawing heavily upon MOMAR I, CONARC published in September 1960 a new study—Field Army-75 (FA-75). This study extended the field army portion of MOMAR I into the 1970-1975 time frame. In FA-75, a universal type division would have to have sufficient flexibility to enable it to be tailored readily to the requirements of the traditional infantry, armor, or airborne roles under a wide range of strategic and tactical conditions. FA-75 assumed that two-thirds or more of the units attached to a division would form a nucleus which would remain relatively stable, while additional units would be added or removed as required for specific conditions.³¹

The decision during the spring of 1961 to shift emphasis within the Department of Defense from nuclear to nonnuclear warfare led to the abandonment of the PENTOMIC organization. CONARC had been directed in December 1960 to undertake yet another study to develop an optimum infantry, mechanized, armored vision organization—this time for the period 1961-1965. The new study—Reorganization Objective Army Division (ROAD) 1965—was submitted by CONARC to the Department of the Army on 1 March 1961 and approved by General George H. Decker, the Army Chief of Staff, a month later. Shortly thereafter Secretary of the Army Elvis J. Stahr, Jr., recommended the abandonment of the PENTOMIC organization and adoption of the new concept. Following approval by the President, the conversion from PENTOMIC to ROAD began in early 1962.

The ROAD division had three brigades and each brigade could control from two to five maneuver battalions. An integral aspect of the ROAD division was its high degree of flexibility, achieved by rapid tailoring of the number and type of combat units. The division base contained the elements required by all divisions, regardless of type. It had the command and control elements, including the three brigade headquarters, the division artillery, and division support command, composed of administrative and service support units. Divisions of various types

were formed by combining varying mixes and numbers of combat maneuver battalions—infantry, airborne infantry, mechanized infantry, and armor—with the division base.³²

Basic Concept for Assignment of Aircraft

As depicted in the TOEs, each ROAD division contained 103 organic aircraft, approximately twice the number in the PENTOMIC division organization. Forty-five of these aircraft were in the division aviation battalion, which replaced the company-size unit found in the PENTOMIC divisions, 25 were in an airmobile company, and 20 were in a general support company. The remaining 58 aircraft were allocated as follows: 18 in the brigade headquarters and headquarters companies (6 in each); 27 in the air cavalry troop of the reconnaissance squadron; 12 in the division artillery headquarters and headquarters battery; and 1 in the aircraft maintenance company of the maintenance battalion.

Aircraft in the ROAD divisions were centralized in the aviation battalion when their utilization elsewhere in the division was not full-time. Aircraft assigned to units other than the aviation battalion were assigned on the basis that full-time support of the unit was required. This arrangement did not preclude temporary attachment of aircraft between organizations as dictated by operational requirements. Distribution of aviation assets in the ROAD division is shown in Chart 4.

The Army Aviation Battalion

The mission of the division Army Aviation Battalion was to provide aviation support for division headquarters, division support command, and other divisional units which did not have organic aircraft. The battalion staff supplemented the division aviation special staff section. The forty-five aircraft in the battalion were available for surveillance, logistical support, command liaison, and the support of small airmobile operations. The battalion also operated the division surveillance drone system, as directed by the division intelligence officer. The battalion included a headquarters and headquarters company, an airmobile company, and an aviation general support company. A total of 51 officers, 26 warrant officers, and 373 enlisted men made up the battalion.

The aviation battalion in airborne divisions differed slightly in organization from the others in that a flight operations center was provided for operations outside of the field army or corps air traffic system. Moreover, the airborne battalion did not contain a drone section. The battalion staff had an additional major who was the assistant division aviation officer.

The headquarters and headquarters company was composed of 13 officers, 1 warrant officer, and 62 enlisted men. The company included a battalion headquarters, company headquarters, and communications, maintenance, and medical sections.

The aviation general support company, commanded by a major, had 26 officers, 6 warrant officers, and 125 enlisted men. The company was composed of a general support, an aerial surveillance, and a service platoon. The general support, an aerial surveillance, and a service platoon. The general support platoon had a tactical support section with ten light observation

helicopters and a utility section with six UH-1Bs. In the aerial surveillance platoon, the aerial radar section had two AO-1s, the aerial infrared section two AO-1s, and the drone section contained twelve drones. The service platoon provided maintenance for aircraft, drones, and communications, as well as airfield service.

The mission of the aviation general support company was to provide support for the division headquarters, support command, and other divisional units without organic aircraft. In addition, the company provided medium range aerial surveillance to acquire combat intelligence and target information and limited general support and reinforcement to units with organic aircraft. The company had the capability of aerial observation, reconnaissance, and surveillance of enemy areas for the purpose of locating, verifying, and evaluating targets, studying terrain, and adjusting fire. It could provide rapid spot aerial photography and night vertical photography from piloted and drone aircraft, radar and infrared surveillance, and radiological survey. The company had the capability for command control, liaison, reconnaissance, and augmentation of aeromedical evacuation from the immediate battlefield.

Commanded by a major, the airmobile company contained 13 officers, 19 warrant officers, and 86 enlisted men. Its components were company headquarters, three airlift platoons, and service platoon. The company's twenty-four UH-1s were in the airlift platoons, while the one UH-1 in the service platoon was primarily for emergency transport of critical parts and maintenance personnel. Each of the airlift platoons was subdivided into two airlift sections of four aircraft each for more effective control.

The airmobile company provided tactical air movement for combat troops in airmobile operations and of combat supplies and equipment within the division area. The company provided supplemental fire support to maneuver elements of the division. It had a continuous operations capability during visual weather conditions and limited operations during instrument weather conditions. It furnished airlift, in a single lift, for one infantry company or one dismounted mechanized infantry company. The airmobile company also was capable of aerial fire support, utilizing organic detachable weapons, and it could augment aeromedical evacuation.³³

Aviation in Separate Brigades

Since the divisional brigades were not designed for permanent independent operations, separate brigades were developed to fill the need for brigade-sized forces. The same organizational concept for aircraft used in the division was applied in the development of the separate brigades. Fifty-five aircraft were organic to each infantry, armored, and mechanized brigade, twenty-seven of which were in the brigade aviation company. The air cavalry troop of the reconnaissance squadron had twenty-seven aircraft, and the maintenance company of the brigade support battalion had one.³⁴

Army Organization for the Period 1965-1970

In June 1961, the Command and General Staff College submitted the preliminary report on CONARC combat developments study requirement, "Army Organization for the Period

1965-1970 (RODAC-70)". In this study, which concentrated on corps and field army organization, all transport aviation units for the field army were assigned to an aviation group at field army. Surveillance aircraft and drones were organized in a company at corps and surveillance squadron at field army. An Army air traffic regulation and identification (AATRI) company was assigned to the field army air defense brigade.

Internal staffing of the report at CONARC resulted in several changes. One corps tactical aviation battalion was added, consisting of a headquarters and headquarters company, corps aviation company, and a surveillance airplane company. Also added was one corps airmobile battalion with its headquarters and headquarters company, airmobile company (UH-1), airmobile company (HC-1), and airmobile company (AC-1). These units were drawn from the field army aviation group to provide the corps with an organic airmobile capability. A corps artillery aviation company (battery) was assigned to the corps artillery. A tactical aviation battalion, consisting of the army aviation company, AATRI company, drone surveillance company, and surveillance airplane company, was assigned to the army headquarters. The aviation group, minus the units assigned to each corps, was placed in the field army support command (FASCOM).

The Vice Chief of Staff of the Army was briefed on the preliminary report, as changed, in July 1961. Although several modifications were directed at the completion of the briefing, the aviation organization was not affected. On 12 August, the Command and General Staff College received guidance for preparation of the final report on this study which it submitted to CONARC on 3 November.

Staffing at CONARC produced two additional changes to aviation organizations. An airmobile battalion was withdrawn from the aviation airlift group in the FASCOM and assigned to the army headquarters. An aerial weapons company was placed in the tactical aviation battalion in each corps. This unit, in concept only, had been undergoing wargaming at CONARC and appeared worthy of consideration for this overall army organizational concept. CONARC forwarded this final study to the Department of the Army on 5 February 1962.

Composite Aviation Battalion

On 7 December 1961, the Department of the Army directed CONARC to develop specific tactics, procedures, and techniques for operations against irregular forces. CONARC was also to ascertain the augmentation in units and equipment required by a brigade of a ROAD division to conduct such operations. This augmentation, to include both divisional and nondivisional support requirements, was to address three levels: minimum brigade air mobility; complete brigade air mobility; and complete division air mobility.³⁵

Special Warfare Aviation Detachment

A proposed organization, and plan of implementation, for an Army aviation unit to support counterinsurgency operations was submitted by CONARC to the Department of the Army on 28 November 1961. The concept was approved on 31 January 1962 with certain modifications, including the substitution of UH-1B for H-34 helicopters. The Department of the Army did not

look favorably on the inclusion of MOHAWK surveillance aircraft, believing that necessary long range reconnaissance would be accomplished by the Air Force.

The Department of the Army forwarded to CONARC the approved advance plan for a Special Warfare Aviation Detachment, Light Aviation Special Support Operations (LASSO), on 27 February. This plan consisted of cellular organizations for performance and operation of specific missions, functions, activities, and equipment. A tentative TOE was prepared on a high priority basis and published by CONARC on 14 March.

This concept permitted flexibility in organization for requirements of varying conditions in connection with training teams and operational teams and provided a capability to operate as a unit with primary missions assigned to one or more teams composed of aerial reconnaissance, aerial assault, and airmobile elements. The flexibility of the organization permitted rapid organization of platoon teams specifically tailored to accomplish the mission assigned. When a mission did not require the entire unit, only those essential elements were committed.

The 22d Special Warfare Aviation Detachment was activated at Fort Bragg on 21 March 1962 and began training on 16 April. The detachment had an authorized strength of 19 officers, 80 warrant officers, and 123 enlisted men.³⁶

Army Aviation Air Traffic Operations

Army Aviation Operating Detachments

In December 1956, CONARC recommended that implementation of an interim air traffic control system be completed in the field at the earliest possible date by activating Army aviation operating detachments (AAOD). On 17 January 1957, the Department of the Army recommended to CONARC that a proposed schedule of activation of AAODs be submitted by CONARC for consideration for inclusion in the Strategic Reserve troop basis. The Department of the Army further recommended that, upon activation, the detachments be assigned to tactical units and undergo intensive training to enable them, within the limits of available equipment, to handle the traffic load expected to be imposed by combat.

On 1 February, CONARC recommended that two AAODs be activated 1 September 1957 and assigned to Third Army and that two additional detachments be activated at the same time and assigned to Fourth Army. Consideration should also be given to activating four more AAODs for assignment to the other CONUS armies. This program was subsequently modified so that CONARC on 18 March proposed activation of the first AAOD at Fort Benning on or about 1 September, with the second unit to be activated in the third quarter of fiscal year 1958 at Fort Bragg, with assignment to the XVIII Airborne Corps. Activation for eventual overseas deployment of one AAOD in each quarter during fiscal years 1959 and 1960 until unit overseas requirements were satisfied was also suggested. The Department of the Army approved the proposed activation schedule and, at the request of the Third Army, CONARC activated the first detachment at Fort Bragg and the second at Fort Benning.

The mission of the Army aviation operating detachment was to provide assistance to Army aviation elements in the combat and communications zones to enable these elements to operate

at night and in adverse weather conditions. In accomplishing this function, the AAOD provided flight information and planning data; navigational facilities at major Army airfields; airfield lighting and instrument approach facilities at major airfields; air traffic coordination and control under all flight conditions; a means of integrating Army flight operations with existing air defense systems; airfield service at major Army airfields; weather services by means of an attached weather cell; warning and in-flight assistance for Army aircraft; and communications incident to the performance of the above functions. Normal assignment was one detachment per corps, army, and major Army airfield in the communications zone. These units were not self-sufficient and were attached to other units for administration, mess, and supply. The detachment was 25 percent mobile utilizing organic automotive transportation.

Each detachment had 4 officers, 2 warrant officers, and 26 enlisted men. The operating elements of the AAOD were the flight operations section, air traffic control team, approach control team, and airfield service section. An airfield augmentation team, added when handling a daily average of over 50 aircraft, provided services for up to 200 aircraft. The first detachments were organized under TOE 1-207C of 15 September 1957.³⁷

The 6th Aviation Operating Detachment (Army), the first of the new units, was activated at Fort Bragg on 4 September 1957. In November, a revised TOE for AAODs prepared by CONARC was approved and published by the Department of the Army as TOE 1-207D, 4 October 1957. The revised table provided additional communications and control equipment.

The Department of the Army and CONARC completed an inspection of the flight operations center (FOC) van and a mock-up of a portable control tower on 20 November 1957. At that time, CONARC took action to ensure delivery of the FOC van to the 6th Aviation Operating Detachment and the U.S. Army Aviation Board at an early date. The U.S. Army Signal Engineering Laboratories, Fort Monmouth, in conjunction with a contractor, developed the portable control tower. The first FOC van was delivered to the 6th Aviation Operating Detachment on 1 December, and a second unit went to the U.S. Army Aviation Board at Fort Rucker on 30 December. Both would undergo a two month service test.

The 6th Aviation Operating Detachment began unit training under its Army Training Program on 19 December and began performing its support mission after completing its training test in May 1958. CONARC recommended to the Department of the Army that the activation of the second AAOD—the 70th Aviation Operating Detachment (Army)—take place at Fort Benning on 1 March 1958.³⁸

During the first half of fiscal year 1959, CONARC reviewed the results of a troop test of Army aviation air traffic operations. It was concluded that the detachment organized under TOE 1-207D was adequate to control the safe and orderly flow of traffic for a limited time only, that supplemental radio communication was necessary when aircraft were beyond range or radio line of sight, that authorized equipment was not completely adequate, and that the air traffic control system was compatible with air defense at such times as they were functioning as a team.

To correct the deficiencies, CONARC proposed that a second AAOD van with an operating crew be provided as an alternate means of control during displacement. Procedures for aircraft

radio relay of control instructions were incorporated in the Army Aviation Air Traffic Operating Manual. CONARC requested that the Chief Signal Officer correct deficiencies in the FOC van and recommend TOE revisions for generators.

Observations by CONARC during Exercise ROCKY SHOALS indicated that the 6th Aviation Operating Detachment was capable of controlling air traffic after landing on shore and that Army and Navy air traffic control systems were compatible.³⁹

Army organizational and operational air traffic regulation doctrine continued to develop. A study on the subject, covering 1959 to 1965, prepared jointly by the Army Aviation School and the Air Defense School and reviewed by other CONARC field agencies, was received in late December 1959. After review and modification, CONARC returned the study to the Army Aviation School on 18 June 1960 for the development of an advanced plan TOE.

The conclusions of this study were that the existing organization, concepts, and procedures for Army air traffic control were inadequate. Undesirable restrictions on air defense reaction time and Army aviation freedom of action were inherent in the existing system and both procedures and organization were inadequate for high traffic densities. The study recommended that an Army air traffic regulation and identification (AATR&I) group be organized at field army level and that the Signal Corps be responsible for the activation, training, and operation of the AATR&I system.

Modification to this study, made by CONARC, including reducing the AATR&I group to an AATR&I company and designating responsibility for the system to Army aviation instead of the Signal Corps. The reduction in the size of the AATR&I unit was made to save men and to retain air traffic control of airfields and ground control approach radar responsibility within the subordinate units. This action was in consonance with the principle of maximum freedom of utilization of Army aviation by subordinate units and maximum responsiveness to the ground commander. Assignment of responsibility for the AATR&I system to Army aviation was based on the mission of the system which was to regulate the flight of aircraft—a function of Army aviation.⁴⁰

The AATR&I company was to replace the existing TOE 1-207D Army aviation operating detachment, which required revision for greater efficiency. The AATR&I company TOE advance plan was staffed at CONARC during the first half of fiscal year 1961 prior to submission to the Department of the Army for advance plan approval.⁴¹

Use of Restricted Airspace

The Federal Aviation Act of 1958 authorized and directed the Administrator, Federal Aviation Administration (FAA), to develop plans and formulate policy with reference to the navigable airspace and to assign by rule the terms, conditions, and limitations necessary for the safe use of the airspace. Accordingly, the FAA Administrator notified all agencies of his intention to assume the airspace responsibility. He recommended abolition of the Airspace Division of the Air Coordinating Committee. This resulted in discontinuance of Army representation on the Regional Subcommittees, the pertinent portions of AR 15-95 no longer being

applicable. Procedures for airspace assignment and utilization were to be accomplished in accordance with FAA regulations.

The Department of the Army requested comments from CONARC on a proposal to provide full-time assignment of qualified field grade Army aviators as Army liaison officers to the FAA Regional Offices and designation of a qualified officer from each CONUS army headquarters to serve as the army commander's representative, on a part-time basis, in coordinating airspace and air traffic control matters of direct interest to the field army. This action was eventually initiated.

Authorization was given for an increase of one officer space to establish an Army liaison officer from CONARC with the FAA Regional Offices at New York, Fort Worth, Kansas City, and Los Angeles. These officers were assigned to the CONUS armies in which the regional offices were located. Each CONUS army and the U.S. Army, Caribbean, continued to retain a qualified officer on the army staff to coordinate airspace and air traffic control matters within the army area. Since CONARC had an overall interest in airspace allocation and utilization, it was kept informed of all negotiations.⁴²

The FAA took numerous actions pertaining to modification and revocation of special use airspace designated used by Army agencies. The FAA in many cases initiated action as the result of Army reports on utilization of airspace. Because it was clear that the FAA would continue aggressive action to reduce the amount of special use airspace, it became incumbent upon Army agencies to prepare and process airspace actions carefully to preclude loss of required special use airspace.

CONARC was represented at a meeting at the Department of the Army in March 1960 which was held for the purpose of discussing airspace problems and to provide guidance for handling airspace actions. The meeting was attended by representatives of all CONUS armies as well as U.S. Army, Alaska, and U.S. Army, Pacific. Verbal guidance given at the meeting was the basis for handling the majority of airspace actions due to the obsolescence of AR 15-95.⁴³

To meet the new FAA requirements, ODCSOPS, Department of the Army, with CONARC help, rewrote AR 15-95 to clarify and update special use airspace responsibilities, methods, and time of reporting, and established airspace officers and airspace officers and airspace liaison officers. It placed CONARC in the reporting chain, charged it with the logistical support of the four Department of the Army airspace representatives, and put most airspace actions through the Army Aviation Sections in the CONUS army headquarters.⁴⁴

U.S. Army Tactical Air Navigation and Landing Aids System

During FY 1955, the Office of the Chief Signal Officer planned to test and evaluate the OCAFF proposed Tactical Air Navigation and Landing Aids System as well as an air traffic control system proposed by the Army Aviation School.⁴⁵

An interim system for air traffic control and navigation of Army aircraft was approved by the Department of the Army and published as Training Circular 1-8, 12 October 1955, Army Aviation Operating Detachment. The same system was included in the AFTA type field army

organization and doctrine. A study of Army aviation electronic equipment was initiated by CONARC for the period through 1965.⁴⁶

A report on the Army Aviation Electronics Program was completed in draft form on 30 August 1956 and coordinated with CONARC and with external agencies. This report was, in effect, an overall summary of the Army aviation electronics program, including equipment and related optional concepts for the period through 1965.

On 21 December, CONARC recommended to the Department of the Army that the implementation of an interim Army air traffic control system be completed in the army in the field at the earliest possible date. This was to be done by the activation of additional Army aviation operating detachments utilizing the latest equipment on the basis of one per corps and field army, both in CONUS and overseas.⁴⁷

The existing systems utilizing ground based nondirectional radio beacons, marker beacons, terminal radar, and airborne automatic directions finders were known to be incompatible with advanced concepts of tactics. The long range CONARC concept envisioned air navigation independent of ground aids. Major elements of the proposed system were self-contained navigators, pictorial terrain and air navigation viewers, and absolute altimeters, which combined with a secure IFF system, would permit Army aircraft to navigate without reference to ground beacons, or air defense agencies. Qualitative materiel requirements were expressed and development was started on all items of the air traffic control, communication, and navigation system. Schedules indicated, however, that an operational capability could not be reached before 1965. The concern of the Commanding General, CONARC, over this situation was expressed on 29 April 1958 in a letter to Lt. Gen. Arthur Trudeau, the Chief of Research and Development, Department of the Army. General Trudeau replied on 19 May that increased funding and effort was being directed to the solution of these requirements and further indicated that the major problems were technical and required advances in the state-of-the-art for solution.

A series of joint CONARC/Department of the Army conferences on the expedited development program were scheduled. The first of these conferences was held at CONARC on 1 and 2 July 1957 to establish agreements with regard to specific equipment and the engineering and service test plans for this equipment. A second conference, on 6 and 7 January 1958, established separate working committees to study communication, combat surveillance, and avionics. The conclusions and recommendations of these committees formed the basis for the 1958 Research, Development, and Testing Program. A similar meeting was held at Fort Monroe, 5-6 August, to consider items of signal equipment which should be accorded expedited development procedures in the 1959 program.⁴⁸

Common TA for Army Airfields

On 1 August 1955, the Department of the Army requested CONARC comments and recommendations relative to a study conducted by the Office of the Chief of Signal Officer to place Signal Corps equipment requirements for Army airfields in tables of allowances (TA) rather than to provide such support by the special projects system. CONARC on 27 August concurred in

the concept, but stated that such TAs should include all equipment for Army airfields as well as Signal Corps items. The Department of the Army agreed with this position and requested that CONARC prepare a common type TA for CONUS Army airfields. CONARC requested the Army Aviation School on 6 October to prepare a draft of a proposed type TA in which all equipment requirements would be provided for Army airfields operating within CONUS. It was also recommended that a type table of distribution be submitted for each class of airfield authorized equipment by this table. CONARC felt that there was sufficient similarity of requirements by all CONUS airfields to permit their grouping in representative categories or classes, based upon the volume and type of operations. The Army Aviation School submitted the proposed TA on 21 March 1956 and CONARC forwarded it to the Department of the Army on 25 September.⁴⁹

Organizational Progress

Progress in the development of Army aviation was assured by organizational changes which took place at both staff and tactical levels. The establishment of the Directorate of Army Aviation in the Department of the Army and its counterpart, the Army Aviation Section, at CONARC were essential to manage the growing aviation assets and to plan for the future development of Army aviation. The increasing importance of organic aviation was recognized in the expanded number of aircraft in the PENTOMIC division which was to double with the conversion to the ROAD organization. At the same time, new aircraft and new doctrine for their employment dictated the formation of new types of aviation organizations. By the end of the period under review, Army aviation had become an integral part of the ground combat army.

At the same time that these organizational changes were taking place, the concept of airmobility was born and was rapidly taking form. The next two chapters will deal first with the adoption of armed aircraft by the Army and then with the doctrinal and organizational developments that took place relating to airmobility, once the necessary armament and aircraft were available.

Endnotes

Chapter IX

1. "The Controversial Fifties," *Army Aviation*, Vol. 8, No. 9 (Sep 60), p. 485.
2. (1) DA ACofS G-3, Summary of Major Events and Problems, FY 55, p. 5; and Army Avn Div, p. 1. (2) DA DCSOPS Summary of Major Events and Problems, FY 56, Army Avn Dir, p. 1 (Both TOP SECRET—Info used is UNCLASSIFIED).
3. *The Army Almanac* (Harrisburg: The Stackpole Company, 1959), p. 301.
4. (1) Joseph Bykofsky, *The Support of Army Aviation 1950-1954*, TC in the Current National Emergency, Historical Report No. 4, 1 Jun 55, pp. 31-33. (2) Report of the Chief of Transportation, 1 Apr 53 - 31 Jan 58, p. 2.
5. *The Army Aviation Depot System: Its Origins and Development*, DA OCoFT, 15 Oct 59, pp. 5, 7-8, and 13.
6. (1) OCoFT Summary of Major Events and Problems, FY 60, pp. 4, 59, 61. (2) "Responsibilities of the TC with Respect to Army Aviation," FY 1960, pp. 1-5.
7. (1) Ltr, General W.G. Wyman to General W.B. Palmer, 28 May 56. (2) FONECON, Palmer and Wyman, 6 Jul 56.
8. CONARC Summary of Major Events and Problems, FY 57, Vol. II, Army Avn Sec, Oct-Dec 56, p. 1, and Jan-Jun 57, p. 1.
9. Organization and Functions Manual, HQ CONARC, 1 Jan 59, Change 21, 10 Oct 61.
10. Ibid.
11. (1) Organization and Functions Manual, HQ CONARC, 1 Jul 62. (2) Maj Kenneth D. Mertel, "USCONARC Report," *Army Aviation*, Vol. II, Jul 62, pp. 365-368. (2) For a detailed description of the reorganization, see CONARC Summary of Major Events and Problems, FY 1962.
12. CONARC Summary of Major Events and Problems, FY 55, Vol. I, Introductory Narrative, Pt B, pp. 35-36, and Vol. VI, G-3 Sec Tng Div, Jan-Jun 55, pp. 14-15.
13. (1) Ibid., FY 57, Vol. II, Army Avn Sec, Oct-Dec 56, p. 10. (2) U.S. Army Aviation Center and Army Aviation School History, 1954-1964, p. 51.
14. CONARC Summary of Major Events and Problems, FY 57, Vol. II, Army Avn Sec, Jan-Jun 57, pp. 7-9.
15. Ibid., FY 55, Vol. I, Introductory Narrative, Pt B, pp. 17- 28; Vol. II, G-3 Sec Doc & Req Div, Jul-Dec 54, p. 4; and Vol. VI, G-3 Sec Doc & Req Div, Jan-Jun 55, pp. 21-22.
16. (1) Virgil Ney, *Evolution of the US Army Division 1939-1968*, CORG, Jan 69, pp. 71-75. (2) Myles G. Marken, Sr., "The Atomic Age Divisions," *Army Information Digest*, Vol. 20, No. 9 (Sep 65), pp. 58-59.
17. E.F. Fisher, Jr., *Relationships of the ROAD Concept to Moral Considerations in Strategic Planning*, OCMH, 28 Oct 64, pp. 42-48 (hereafter cited as Fisher, *ROAD Concept*).
18. CONARC Summary of Major Events and Problems, FY 55, Vol. I, Introductory Narrative, Pt B, pp. 22-25.
19. Fisher, *ROAD Concept*, pp. 48-50.
20. (1) Army Aviation Handbook, US Army Armor School, Aug 59, pp. 3-4. (2) *Evolution of Army Aviation within the Division (A Limited Study)*, 1940-1965, Army Avn School, 1 Jun 66.
21. (1) Army Aviation Handbook, US Army Armor School, Aug 59, pp. 3-4. (2) *Evolution of Army Aviation within the Division (A Limited Study)*, 1940-1965, Army Avn School, 1 Jun 66.
22. CONARC Summary of Major Events and Problems, FY 57, Vol. II, Army Avn Sec, Jan-Jun 57, pp. 10-11.
23. Army Aviation Handbook, p. 4.
24. Army Aviation Handbook, pp. 65-85.
25. (1) CONARC Summary of Major Events and Problems, FY 55, Vol. I, Introductory Narrative, Pt B, pp. 29-30; and Vol. II, G-3 Sec Doc & Req Div, Jul-Dec 54, p. 8. (2) DA ACofS G-3 Army Avn Div,

Summary of Major Events and Problems, FY 55, p. 3. (3) DA DCSOPS Army Avn Dir, Summary of Major Events and Problems, FY 56, p. 1 (Both TOP SECRET—Info used is UNCLASSIFIED).

26. CONARC Summary of Major Events and Problems, FY 55, Vol. VI, G-3 Sec Tng Div Sp Tng Br, pp. 16-17.

27. Ibid., FY 56, Vol. II, G-3 Sec Doc & Req Div, Jul-Dec 55, supplement.

28. (1) Ibid., FY 58, Vol. II, Army Avn Sec, Jan-Jun 58, pp. 10-11. (2) Ltr OPS AV OR-7, DA DCSOPS to CONARC, 5 Aug 57, subj: Allocation of and Training in Medium Helicopters.

29. (1) Fisher, *ROAD Concept*, pp. 57-58. (2) US Army Expansion, 1961-1962, p. 26.

30. Fisher, *ROAD Concept*, pp. 58-63.

31. Ibid., pp. 63-68.

32. (1) US Army Expansion, 1961-1962, pp. 29, 135. (2) Fisher, *ROAD Concept*, pp. 74-83.

33. Lt Col Morris G. Rawlings, "Army Aviation and the Reorganized Army Division," *United States Army Aviation Digest*, Vol. 8, No. 2 (Feb 62), pp. 1-4.

34. CONARC Summary of Major Events and Problems, FY 62, Vol. VI, Army Avn Sec, Jul-Dec 61, pp. 6-10.

35. Ibid., FY 62, Vol. III, DCSOPS Doc & Req Div, Jul-Dec 61, p. 23.

36. (1) Ltr OPS CD DC, Brig Gen Walter B. Richardson, Dir of CD, DA DCSOPS, to CG CONARC, 31 Jan 62, subj: Development of Army Aviation Capability for Support of Counterinsurgency Operations. (2) CONARC Summary of Major Events and Problems, FY 62, Vol. III, DCSOPS Doc & Req Div, Jul-Dec 61, p. 8; Vol. IV, DCSOPS SWCA Div, Jan-May 62, p. 3, and Org & Equip Div, Jan-May 62, pp. 7-8. (3) CONARC GO 16, 19 Mar 62. (4) TOE 31-500T, 14 Mar 62.

37. CONARC Summary of Major Events and Problems, FY 57, Vol. II, Army Avn Sec, Jan-Jun 57, pp. 3-6.

38. Ibid., FY 58, Vol. II, Avn Sec, Jul-Dec 57, pp. 3-4.

39. Ibid., FY 59, Vol. III, Avn Sec, Jul-Dec 58, p. 16.

40. Ibid., FY 60, Vol. V, Avn Sec, Jul-Dec 59, p. 4; and Jan-Jun 60, pp. 8-9.

41. Ibid., FY 61, Vol. VI, Avn Sec, Jul-Dec 60, p. 8.

42. Ibid., FY 60, Vol. V, Avn Sec, Jul-Dec 59, pp. 8-9.

43. Ibid., FY 60, Vol. V, Avn Sec, Jan-Jun 60, pp. 16-17.

44. Ibid., FY 61, Vol. VI, Avn Sec, Jul-Dec 60, p. 10 (CONFIDENTIAL—Info used is UNCLASSIFIED).

45. Ibid., FY 55, Vol. IV, Cbt Dev Sec Gen Div, Jul-Dec 54, p. 4.

46. Ibid., FY 56, Vol. IV, Cbt Dev Sec Gen Div, Jul-Dec 55, p. 3.

47. Ibid., FY 57, Vol. VI, Cbt Dev Sec Sp Div, Jul-Dec 56, p. 1.

48. Ibid., FY 58, Vol. II, Avn Sec, Jan-Jun 58, pp. 8-9.

49. Ibid., FY 56, Vol. II, G-3 Sec Org & Equip Div, Jul-Dec 55, and Vol. VI, G-3 Sec Org & Equip Div, Jan-Jun 56, pp. 23-24; FY 57, Vol. III, G-3 Sec Org & Equip Div, Jul-Dec 56, p. 31.